NOTES ON NEW AND NOTEWORTHY PLANTS. CXXVIII

Harold N. Moldenke

ERIOCAULON DECANGULARE f. *LATIFOLIUM* (Chapm.) Mold., stat. nov.
Eriocaulon decangulare var. *latifolium* Chapm. ex Mold., N. Am. Fl. 19: 21. 1937.

ERIOCAULON LINEARE f. *GIGAS* (Mold.) Mold., stat. nov.
Eriocaulon lineare var. *gigas* Mold, Phytologia 27: 444. 1974.

VERBENA BRACTEATA f. *BREVIBRACTEATA* (A. Gray) Mold., stat. & comb. nov.
Verbena bracteosa var. *brevibracteata* A. Gray, Syn. Fl. N. Am. 2 (1): 336. 1878.

VERBENA BRACTEATA f. *IMBRICATA* (Woot. & Standl.) Mold., stat. nov.
Verbena imbricata Woot. & Standl., Contrib. U. S. Nat. Herb. 16: 166. 1933.

VERBENA URTICIFOLIA f. *SIMPLEX* (Farwell) Mold., stat. nov.
Verbena urticifolia var. *simplex* Farwell, Papers Mich. Acad. Sci. 3: 103. 1924.

VITEX AGNUS-CASTUS f. *CAERULEA* (Rehd.) Mold., stat. nov.
Vitex agnus-castus var. *caerulea* Rehd. in L. H. Bailey, Cycl. Am. Hort. 4: 1947 [as "Hort."]. 1902.

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ADDITIONAL NOTES ON THE GENUS *DIOSTEA*. II

Harold N. Moldenke

DIOSTEA JUNCEA (Gill. & Hook.) Miers

Additional bibliography: Thanikaimoni, Trav. Sect. Scient. Techn. Inst. Franç. Pond. 13: 80. 1976; Mold., Phytologia 44: 125--126. 1979.

Recent collectors describe this species as a many-branched bush or virgate shrub, 1--6 m. tall, resembling a *Cytisus*, or a perennial subaphyllous herb, the branches pendulous, and the flowers tubular, slightly fragrant. They have encountered it on lakeshores, in sunny places, on open dry river terraces and partially shaded slopes, and on steep, dry, rocky, west-facing slopes in sparse chaparral, at 394--2000 m. altitude, flowering from October to March, as well as in May and June, fruiting in February and June. Morrison reports it

"not common", but both King and Mexia speak of it as "common"; Burkart and Zöllner report it "abundant". Our son, Dr. Andrew R. Moldenke, in response to a query regarding his encountering it during his work on pollination ecology in Argentina and Chile, says "I know it well - it is a prominent species in many places".

The corollas are said to have been "white" on *Behn s.n.*, *Blake s.n.*, *Mexia 7878*, *Morrison 16781*, and *Morrison & Wagenknecht 17509*, "whitish-lavender" on *McClintock MEX.2.1076*, "lilac" on *Burkart 19871*, "light-lilac" on *Lourteig 2543*, "blue" on *Meyer 7472*, "rose" on *Ruiz Leal 23948*, and "very bright-violet" on *Cordini 107*, while Makins (1936) describes them as "pale-lilac". The only vernacular name recently reported for the species is "retama". Darlington & Wylie (1956) list the chromosome number as "x = 8?..9?" on the authority of Junell (1934), who, however, reports it as 32.

Makins (1936) lists the species as "*Diostea (Baillonia) juncea*" and refers to the fruit as a "berry enclosed in a persistent calyx, regarding it as endemic to Chile. Gay (1849) comments that "Esta planta se cria en las cordilleras de Acancagua é igualmente en la provincia de Valdivia, cerca del rio Negro" in Chile. Macloskie (1905) found it in "Valdivia to N. Patagon., Mts. in Chubut".

The Hooker (1829) reference in the bibliography of *D. juncea* is often incorrectly cited as "1830". Hooker divides the taxon into two forms: "α foliis integerrimis, spicis pubescentibus" and "β foliis grosse serratis, spicis glabriusculis".

Erdtman (1966) has examined the pollen of *Morrison 16781* and *Werdermann 545* and describes the grains as very verbenoid, 3-colporate, suboblate-oblate spheroidal, 32 x 36 mu. Heusser (1971) describes the pollen as "Monad, isopolar, radiosymmetric; tricolporate, colpi long and narrow, constricted equatorially, with costae, colpi pores transverse constricted or more or less circular, variable in size, generally conspicuous; prolate spheroidal-subprolate, amb triangular with sides concave; exine 1--1.4 mu thick, tectate, more or less psilate; 36--48 x 34--43 mu", based on *Kuschel SGO 68389* from Bío-Bío, Chile. Markgraf & D'Antoni (1978) describe the pollen as "Tricolporate, scabrate. Grain prolate-spheroidal, 31 x 29 um. Exine 2 um thick. Pore lalongate 13 x 4 um. Costae colpi narrow. Polar A 0.34 amb sub-angular", based on *Markgraf s.n.* from Río Negro. He also cites *Heusser 672* and Erdtman p. 448 (1966). It is assumed that by "um" he means "mu".

Encke (1960) says of this species: "Interessanter, an *Spartium junceum* erinnernder Kalthausstrauch von ähnlicher Kultur wie *Carmichaelia*. Vermehrung durch Aussaat oder reife Sommerstecklinge in Juil, August unter Glas."

Briquet (1902) cites *Wilczek 39*. Troncoso (1974) cites *Castellanos 20493* from Neuquén and *Soriano 2905* from Río Negro, Argentina, and *Riccardi 14588* from Linares & *Cuming 225* from Province undetermined, Chile. She regards the genus as monotypic, this the type and only species. Acevedo de Vargas (1951) maintains *D. scirpea* (R. A. Phil.) Miers as valid. She says: "Se menciona esta planta argentina aquí, descripta originalmente de Chile por el Dr. R. A. Philippi porqué, según las publicaciones, no ha sido vista por los botanicos, siendo por tal motivo confundida con *Diostea juncea*. Se-

gún mi opinión debería ser subordinada a *Diostea scoparia*. Material estudiado: Portillo, lado de Mendoza, *W. Diaz, 186162* (Typus et isotypus a *Lippia scirpea*: Sgo. *42407* et *54830*). Planta de aspecto semejante a *Diostea scoparia* y *D. juncea*. Obs. - En la sinonimia de *Diostea juncea*, establecida por el Dr. Moldenke en Lilloa V: 386. 1940, figura *Verbena scirpea* R. A. Phil. ex Moldenke (previamente citada par esta mismo botánico en List Alf. Prelim. 48. 1940), combinación que, según mi parecer, se refiere a *Lippia scirpea* Phil., por ser esta planta, sin duda alguna, la única descripta por el Dr. Philippi de epíteta específico *scirpea* y que posteriormente sirvió de base a Miers para establecer su *Diostea scirpea*. Del estudio comperado del material tipo, dibujos y diagnosis originales de esta especie con sus congéneres chilenas se deduce que se trata de plantas distintas, cuyos caracteres diferenciales podrían resumirse así:

A. Arbusto ceniciento-peludo, con ramas prismaticas. *D. cinerascens*.
A'. Arbusto lampiños, con ramas cilíndricas.
  B. Planta poco foliosa; hojas mayores de 1 cm. de largo; corola de más o menos cuatro veces la longitud del cáliz. *D. juncea*.
  B'. Plantas subáfilas; hojas menores de 1 cm. de largo; corola más o menos 3 veces o el doble de la longitud del cáliz.
    C. Cáliz cortamente dentado, más o menos pubescente; corola blanca. *D. scoparia*.
    C'. Cáliz con dientes subulados, casi glabro; corola amarilla (en seco, según su autor). *D. scirpea*.

Material of *D. juncea* has been misidentified and distributed in some herbaria as *D. cinerascens* (Schau.) Mold., *Citharexylon alpinum* Poepp., *Neosparton aphyllum* (Gill. & Hook.) Kuntze, and *Verbena cinerascens* Gill. & Hook. On the other hand, the *Zöllner 5350*, distributed as *D. juncea*, actually is *D. cinerascens* (Schau.) Mold., while *Eyerdam 10073* and *Negrete s.n.* are *D. scoparia* Gill. & Hook.) Miers.

Additional citations: CHILE: Aconcagua: *D. O. King 715* (Bm); *Poeppig II.85* (Mu--304); *Zöllner 766* (Ac), *3074* (Ac), *9873* (Ld). Cautin: *Morrison & Wagenknecht 17509* (Ba). Curicó: *Grau & Grau 1586* (Mu); *Mexia 7878* (W--1707408); *Werdermann 545* (Mu); *Zöllner 8447* (N). Linares: *Zöllner 3072* (Ld). Malleco: *Sparre & Smith 183* (Z). Nuble: *Lourteig 2543* (W--2797792). Santiago: *Morrison 16781* (Ba). Valdivia: *Hollermayer s.n.* [Werdermann 1376] (Bm, Ut--91221). Province undetermined: *Behn s.n.* [Cordillera de los Andes, 22 Novbr. 1929] (Mu). ARGENTINA: Chubut: *Burkart 19871* (N, W--2567993); *Castellanos s.n.* [Herb. Inst. M. Lillo 118404] (Gg--406029). Mendoza: *Ruiz Leal 23948* (Tu--162423). Río Negro: *Buchtien 1346* (Mu--4036); *Cordini 107* (W--1702959); *De Borba 416* (Ca--M165563); *Fabris 2178* (Mu); *T. Meyer 7472* (N), *7495* (Ca--166062); *Pedersen 323* (W--2122369); *Rentzell 14650* (Ca--3319); *Soriano 176* (Ca--M004156), *2905* (W--2595175);. CULTIVATED: California: *Mrs. A. S. Blake s.n.* [May 19, 1952] (Ba, Gg--373710); *Jerabek s.n.* [March 1945] (Sd--35406); *McClintock MEX-2.1076* (Ba).

DIOSTEA SCOPARIA (Gill. & Hook.) Miers

Emended synonymy: *Verbena scoparia* Hook. apud Schau. in A. DC., Prodr. 11: 555 in nota. 1847; Mold., Alph. List Inv. Names Suppl.

1: 26, in syn. 1947. *Baillonia spartioides* Ball, Notes Nat. S. Am. 202. 1887.

Additional & emended bibliography: Hook., Bot. Misc. 1: 161--162, pl. 47. 1829; Steud., Nom. Bot. Phan., ed. 2, 2: 750. 1841; D. Dietr., Syn. Pl. 3: 601. 1843; Walp., Nova Act. Nat. Caes. Leopold.-Carol. Cur. 19, Suppl. 1: 379. 1843; Schau. in A. DC., Prodr. 11: 544 & 555. 1847; C. Gay, Hist. Fis. Chile Bot. 5: [20] & 21. 1849; Buek, Gen. Spec. Syn. Candoll. 3: 496. 1858; Bocq., Adansonia, ser. 1, 3: [Rev. Verbenac.] 203. 1863; Miers, Trans. Linn. Soc. Lond. Bot. 27: 102--105. 1870; F. Phil., Cat. Pl. Vasc. Chil. 221. 1881; Ball, Notes Nat. S. Am. 202. 1887; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 1: 768. 1893; Briq. in Engl. & Prantl, Nat. Pflanzenfam., ed. 1, 4 (3a): 147. 1894; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 2: 1179. 1895; Briq., Ann. Conserv. Jard. Bot. Genève. 4: 20. 1900; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 1, 250. 1903; Reiche & Phil., Fl. Chil. 5: 282 & 299. 1910; Sanzin, Anal. Soc. Cient. Argent. 88: 98, 116, 118, 122, 123, & 133, fig. 26. 1919; Baeza, Nomb. Vulg. Pl. Silv., ed. 2, 49--50, 84, 257, & 269. 1930; H. C. Comber, Gard. Chron., ser. 3, 92: 373. 1932; H. F. Comber, Gard. Chron., ser. 3, 92: 413. 1932; H. S. Marshall, Kew Bull. Misc. Inf. 1936: 94. 1936; Mold., Geogr. Distrib. Avicen. 29. 1939; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 2, 250. 1941; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 1: 768 (1946) amd imp. 2, 2: 1179. 1946; Acevedo de Vargas, Bol. Mus. Nac. Hist. Nat. Chile 25: 44. 1951; Darlington & Wylie, Chromos. Atlas, ed. 2, 322 & 323. 1956; Durand & Jacks., Ind. Kew. Suppl. 1, imp. 3, 250. 1959; Muñoz Pizzaro, Sin. Fl. Chil. 199. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 3, 1: 768 (1960) and imp. 3, 2:1179. 1960; Muñoz Pizzaro, Espec. Pl. Descr. Philip. 110. 1960; Mold., Phytologia 9: 113 & 114. 1963; Troncoso in Böcher, Hjerting, & Rahn, Dansk. Bot. Arkiv 22: 105 & 109--110. 1963; Hansen, Excerpt. Bot. A.7: 139. 1964; Bolkh., Grif, Matvej., & Zakhar., Chromos. Numb. Flow. Pl., imp. 1, 715. 1969; Anon., Biol. Abstr. 51 (16): B.A.S.I.C. S.46. 1970; Mold., Biol. Abstr. 51: 9025. 1970; Mold., Fifth Summ. 1: 191, 195, & 476 (1971) and 2: 550, 694, & 876. 1971; Bolkh., Grif, Matvej., & Zakhar., Chromos. Numb. Flow. Pl., imp. 2, 715. 1974; Troncoso, Darwiniana 18: 310, 313, & 412. 1974; Mold., Phytologia 28: 109 & 403 (1974) and 30: 181. 1975; Markgraf & D'Antoni, Pollen Fl. Argent. 20, 32, 98, 114, 122, & 207, pl. 42-359. 1978; Mold., Phytologia 44: 123. 1979.

Additional & emended illustrations: Sanzin, Anal. Soc. Cient. Argent. 88: 123, fig. 26. 1919; Markgraf & D'Antoni, Pollen Fl. Argent. pl. 42-359. 1978.

Recent collectors describe this species as a bush or shrub, 0.5--1 m. tall, the leaves tiny, borne on *Ephedra*-like shoots, and the flowers aromatic. They have found it growing on steep rocky slopes in association with *Valeriana, Tropaeolum, Euphorbia, Phacelia, Acaena, Verbena, Oxalis, Calceolaria, Sisyrinchium, Nassauvia, Lardizabala,* etc. or with *Nothofagus obliqua* and *Schizanthus hookeri* at altitudes of 1600--3500 m., flowering from November to April, fruiting in January and February.

The corollas are said to have been "blue" on *Venturi 6970,* "blu-

ish-white" on *Ricardi 2910*, "lilac" on *Semper 631*, "pale-violet or blue" on *Hutchison 42*, and the "tube pink, lobes dingy-white" on *Worth & Morrison 16692*.

Markgraf & D'Antoni (1978) describe the pollen of this species as "Tricolporate, psilate. Grain oblate-spheroidal, 47 x 39 um. Exine 2.5 um thick. Pore lalongate 13 x 2.5 um. Polar A 0.4, amb sub-angular", based on *Markgraf s.n.* from Mendoza. It is assumed that by "um" this author means "mu". Darlington & Wylie (1956), as well as Bolkhovskikh and his associates (1969), give the chromosome number as 20.

It should be noted that Troncoso limits the genus *Diostea* to *D. juncea*, the type species, regarding *D. cinerascens* and *D. scoparia* as belonging to the genus *Verbena*. In this connection Miers (1871) comments that "Schauer, in his Monograph of the family, places *D. juncea* in *Lippia* and *D. scoparia* in *Verbena*, stating erroneously that its fruit is a 4-coccous capsule".

Reiche (1910) says: "De *Lippia aphylla* (de la Campana de Quillota) existe solamente un fragmento. En la cordilleras de las provincias centrales, en el lado chileno i arjentina. Enero, Febrero." Walpes (1843) lists it from the Cordillera de S. Fernando, flowering there in March. Skǫttsberg (1916) encountered it on arid steppes, at 1300 m. altitude, at Arroyo Chacaihuerruca, Río Negro, in subandean Patagonia, giving its overall distribution as the Andes of middle Chile, Argentina, and northern Patagonia, citing *Skottsberg 911*.

Vernacular names reported for *D. scoparia* are "chavelillo del campo" and "escobilla del campo".

Troncoso (1974) cites *Werdermann 788* from Santiago, Chile, and *Ruiz Leal 1023* from Mendoza, Argentina, both deposited in the San Isidro herbarium.

It should be noted that Schauer's work, cited in the bibliography of this species, was published in 1847, not "1849" as is sometimes cited. Similarly, Hooker's work appeared in 1829, not "1830" as it is sometimes cited.

Material of *D. scoparia* has been misidentified and distributed in some herbaria as *D. juncea* (Gill. & Hook.) Miers, *Glandularia* sp., *Lippea juncea* Gay, *Lippia juncea* Gill. & Hook., *Neosparton aphyllum* (Gill. & Hook.) Kuntze, *Verbena aphylla* Gill. & Hook., and *V. ephedroides* Cham.

Additional citations: CHILE: Aconcagua: *Buchtien s.n.* [Juncal, Uspallata Pass, 2200 m., 2/2/1903] (Mu); *s.n.* [Juncal, 2300 m., II. 1903] (W--1177977); *Marticorena & Matthei 613* (Z); *Ricardi 2910* (Ac); *Simon 477* (Mi). Colchagua: *Ricardi 3177* (Ac). Coquimbo: *Worth & Morrison 16692* (Ba). Santiago: *Claude-Joseph 814* (W--1058772); *Marticorena & Matthei 595* (Ac); *Werdermann 488* (Mu). Valparaiso: *Eyerdam 10073* (W--2371847); *Hutchison 42* (Ca--143640, W--2321562). Province undetermined: *Dessauer s.n.* [Cerro de la Viscacha] (Mu); *Gillies s.n.* [Pantanillo & San Isidro, Nov. 13, 1825] (Bm), *s.n.* [unarranged coll.] (Bm). ARGENTINA: Catamarca: *Ellenberg 4638* (Ld), *4641a* (Ac); *Jörgensen 1403* (W--921938); *Venturi 6970* (W--1591511). Mendoza: *Cuezzo & Balegno 1900* (Au, Du--374452, Go), *1923* (Au, Du--374515, Go); *Lourteig 813* (N); *Negrete s.n.* (Mu); *Ruiz*

Leal 12741 (Tu--137896).

DIOSTEA SCOPARIA var. *PUBERULA* (Troncoso) Mold., Phytologia 19: 319. 1970.

Synonymy: *Verbena scoparia* var. *puberula* Troncoso in Böcher, Hjerting, & Rahn, Dansk Bot. Arkiv 22: 109--110. 1963. *Diostea scoparia* var. *puberuca* Anon., Biol. Abstr. 51 (16): B.A.S.I.C. S.63, sphalm. 1970.

Bibliography: Troncoso in Böcher, Hjerting, & Rahn, Dansk Bot. Arkiv 22: 109--110. 1963; Hansen, Excerpt. Bot. A.7: 139. 1964; Anon., Biol. Abstr. 51 (16): B.A.S.I.C. S.63. 1970; Mold., Biol. Abstr. 51: 9025. 1970.

According to Troncoso (1963) this variety "Differt a typo caulibus rhachidibus bracteis calyce subdense puberulis; bracteis maioribus, dimidium calycis aequantibus vel superantibus; corollarum tubo minus curvato, lobis parce maioribus". It is based on *Böcher, Hjerting, & Rahn 1143* from among dry rocks northwest of Cuesta de los Terneros, San Rafael, Mendoza, Argentina, at 1200 m. altitude, on October 30, 1962, where it, together with *Hyalis argentea*, dominated the vegetation.

DIOSTEA SCOPARIA VAR. *SUBULATA* Mold., Phytologia 44: 123. 1979.

Bibliography: Mold., Phytologia 44: 123. 1979.

This variety differs from the typical form of the species in having the calyx-teeth definitely and conspicuously long-subulate, often twisted together in age.

It is based on *Semper 631* from sand-dunes at Pampa de Tabolango, Las Heras, Mendoza, Argentina, at 2000 meters altitude, collected on April 19, 1945, and deposited in the Britton Herbarium at the New York Botanical Garden. The collector notes that the flowers, in April, were aromatic, the corollas pink.

It is of interest to note here that Acevedo de Vargas (1951), in describing the differences between what she calls *Diostea scirpea* Miers and *D. juncea* (Gill. & Hook.) Miers, maintains that *D. scirpea* also has subulate-toothed calyxes, but the calyx itself is "casi glabra" and the corolla yellow.

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ADDITIONAL NOTES ON THE GENUS *DIPYRENA*. I

Harold N. Moldenke

Information and specimens which have come to my attention since the publication of my original paper on this genus in 1961 are hereinafter summarized. Full explanation of the herbarium acronyms used in this and in all others of my long series of papers in the present journal since 1933 is given in my Fifth Summary of the *Verbenaceae*...etc. (1971), pages 795--801.

DIPYRENA Hook.

Additional synonymy: *Wilsonia* Gill. & Hook. in Hook., Bot. Misc. 1: 172, pl. 49. 1829 [not *Wilsonia* R. Br., 1810, nor Raf., 1814]. *Wilsonia* Hook. apud Spach, Hist. Nat. Vég. 9: 227. 1840. *Wilsonia* Hook. & Gill. apud Schau. in A. DC., Prodr. 11: 535, in syn. 1847. *Dipyrema* Bocq., Adansonia, ser. 1, 2: 155, sphalm. 1862.

Additional & emended bibliography: Meisn., Pl. Vasc. Gen. 1: 290 (1839) and 2: 199. 1840; Spach, Hist. Nat. Vég. 9: 227. 1840; D. Dietr., Syn. Pl. 3: 371. 1843; Walp., Nov. Act. Acad. Nat. Caes. Leopold.-Carol. Cur. 19, Suppl. 1: 379. 1843; Schnitzl., Iconogr. Fam. Nat. 2: 137 Verbenac. [3]. 1856; Buek, Gen. Spec. Syn. Candoll. 3: 144. 1858; Bocq., Adansonia, ser. 1, 2: 87 & 155 (1862) and 3: 180 & 212. 1863; Bocq., Rév. Verbenac. 87, 116, 155, 180, & 212, pl. 18. 1863; Miers, Trans. Linn. Soc. Lond. Bot. 27: 103. 1871; Hieron., Bol. Acad. Nac. Cienc. Córdoba 4: [Sert. Sanjuan.] 66. 1881; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 1: 777 (1893), imp. 1, 2: 628 (1894), and imp. 1, 2: 1231. 1895; Reiche & Phil., Fl. Chile 5: 303. 1910; M. Kunz, Anatom. Untersuch. Verb. 55--56. 1911; Nienburg, Justs Bot. Jahresber. 39 (2): 1051. 1916; Sanzin, Anal. Soc. Cient. Argent. 88: 96, 98, 99, 104--106, 133, & 134, fig. 9. 1919; Metcalfe & Chalk, Anat. Dicot. 1031--1033 & 1040. 1950; Angely, Cat. Estat. Gen. Bot. Fan. 17: 4. 1956; Muñoz Pizarro, Espec. Pl. Descr. Phil. 109 & 110. 1960; Mold., Biol. Abstr. 36: 2311. 1961; Hocking, Excerpt. Bot. A.4: 224. 1962; Dalla Torre & Harms, Gen. Siphonog., imp. 2, 431. 1963; Troncoso in Böcher, Hjerting, & Rahn, Dansk Bot. Arkiv 22: 105. 1963; Langman, Select. Guide Lit. Flow. Pl. Mex. 208 & 1010. 1964; F. A. Barkley, List Ord. Fam. Anthoph. 75 & 160. 1965; Mold., Phytologia 12: 6. 1965; Airy Shaw in J. C. Willis, Dict. Flow. Pl., ed. 7, 368 & 1195. 1966; Mold., Résumé Suppl. 16: 30. 1968; Anon., Torr. Bot. Club Ind. Am. Bot. Lit. 3: 309. 1969; J. Hutchins., Evol. Phylog. Flow. Pl. 469 & 681. 1969; Rouleau, Guide Ind. Kew. 62 & 352. 1970; Mold., Fifth Summ. 1: 5, 195, 476, & 477 (1971) and 2: 613, 670, 735, 755, & 876. 1971; Whipple, Journ. Elisha Mitch. Sci. Soc. 88: [1]. 1972; Airy Shaw in J. C. Willis, Dict. Flow. Pl., ed. 8, 376 & 1225. 1973; Troncoso, Darwiniana 18: 296, 301, 302, 364--366, & 409, fig. 21. 1974.

It should be noted here that the *Wilsonia* of Brown is a genus in the *Convolvulaceae*, while *Wilsonia* Raf. is probably a synonym of *Epacris* J. R. & G. Forst. in the *Epacridaceae*.

Bentham (1876) remarks concerning *Dipyrena*: "Bocquillon....hoc genus *Privae* adjunxit, habitu tamen longe recedit, facileque limitatur calyce brevi fructifero patente 5-fido nec accreto ore clauso foliis alternis aliisque notis. Species 2 Chilenses a Philippi.... descriptae, foliis oppositis drupa 2-pyrena pyrenis 1-locularibus, verisimiliter ad *Bailloniam (Diosteam*, Miers) referendae". Schauer (1847) says of *Dipyrena:* "A *Priva* vix distinctum". Gay (1849) comments that "Este jénero es muy afin del jénero *Priva* por sus frutos, pero se distingue fácilmente de el por su traza, la pequeñez de su cáliz, y sobre todo por sus tallos y ramos leñosos".

The Endlicher (1838) reference cited in the bibliography above is often mis-cited by the title-page date "1836-1856", but the page involved here was actually issued in 1838.

This is a monotypic genus, the type species being *Wilsonia glaberrima* Gill. & Hook. [=*Dipyrena glaberrima* (Gill. & Hook.) Hook.].

DIPYRENA GLABERRIMA (Gill. & Hook.) Hook.

Emended synonymy: *Dipyrena glaberrima* Hook. apud Walp., Nov. Act. Acad. Nat. Caes. Leopold.-Carol. Cur. 19, Suppl. 1: 379. 1843. *Wilsonia glaberrima* Hook. apud Walp., Nov. Act. Acad. Nat. Caes. Leopold.-Carol. Cur. 19, Suppl. 1: 379, in syn. 1843. *Dipyrena glaberrima* Hook. & Gill. apud Schau. in A. DC., Prodr. 11: 535. 1847. *Dipyrena glaberrima* Gill. & Hook. ex Mold., Résumé 278, in syn. 1959; Troncoso, Darwiniana 18: 366. 1974. *Dipyrena glaberrima* (Gill. & Hook.) Mold., Phytologia 26: 372, in syn. 1973.

Bibliography: see under the genus as a whole.

Emended illustrations: Sanzin, Anal. Soc. Cient. Argent. 88: 105, fig. 9. 1919; Troncoso, Darwiniana 18: [365], fig. 21. 1974.

Recent collectors describe this plant as a shrub, 1.2 m. tall, with fragrant flowers, and have encountered it at altitudes of 2000 to 2500 meters, flowering in April and December. The corollas are said to have been "cream"-color on *Semper 245* & *588*.

Gay (1849) says of this plant: "Se cria en las cordilleras centrales entre Santiago y Mendoza y á una altura de 5 a 6000 piés. Es muy parecida á una verbena y el cáliz ofrece la misma forma, rompiéndose en un lado á proporcion que el fruto se acerca de la madurez".

The Hooker (1829) reference in the bibliography of this species is sometimes erroneously cited as "1830".

Troncoso (1963) cites *Böcher, Hjerting, & Rahn 2114* and (1974) *Boelcke & al. 9967* from Mendoza, Argentina. Briquet (1894) lists it as only found in Mendoza. The "*Dipyrena (Wilsonia) glaberrima*" of Walpers (1843) is a misidentification of a specimen of *Junellia aspera* (Gill. & Hook.) Mold.

Material of *D. glaberrima* has also been misidentified and distributed in some herbaria as *Junellia asparagoides* (Gill. & Hook.) Mold.

Additional citations: ARGENTINA: Mendoza: *Cáceres & Paci 283* (Au--243309, Du--375259); *Cuezzo & Balegno 1943* (Ba); *Ruiz Leal 20695* (Tu--137881); *Semper 245* (W--2049689), *588* (N).

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ADDITIONAL NOTES ON THE GENUS *HIEROBOTANA*. IV

Harold N. Moldenke

Information from new literature and herbarium specimens received since the publication of my last previous notes on this genus in 1972 is hereinafter summarized. The herbarium acronyms employed in this and all others in my long series of papers in the present journal since 1929 are fully explained in my "Fifth Summary of the *Verbenaceae*....." etc. (1971), pages 2: 795--801.

HIEROBOTANA Briq.

Additional & emended bibliography: Steud., Nom. Bot. Phan., ed. 1, 873 (1821) and ed. 2, 2: 750. 1841; Schau., Linnaea 20: 477. 1847; Buek, Gen, Spec. Syn. Candoll. 3: 495. 1858; Barnhart, Bull. Torr. Bot. Club 29: 500. 1902; Macloskie in W. B. Scott, Rep. Princeton Univ. Exped. Patag. 8 (2): 682 & 686. 1905; Knuth, Feddes Repert. Spec. Nov. Beih. 43: [Init. Fl. Venez.] 598. 1927; Dalla Torre & Harms, Gen, Siphonog., imp. 2, 430. 1963; Rouleau, Guide Ind. Kew. 92 & 352. 1970; Mold., Fifth Summ. 1: 5, 6, 136, & 140 (1971) and 2: 527, 662, 674, 678, 752, & 880. 1971; Mold., Phytologia 24: 499 & 509. 1972; Airy Shaw in J. C. Willis, Dict. Flow. Pl., ed. 8, 559. 1973; Anon., Biol. Abstr. 55 (9): B.A.S.I.C. S.115. 1973; Hocking, Excerpt. Bot. A.21: 115 & 116. 1973; Rogerson, Bull. Torr. Bot. Club 100: 192. 1973; Hocking, Excerpt. Bot. A.23: 292. 1974; Mold., Phytologia 28: 256 & 509. 1974; Soukup, Biota 11: 2, 11--12, & 21. 1976; Mold., Phytologia 36: 33 & 506 (1977) and 40: 414 & 508. 1978.

HIEROBOTANA INFLATA (H.B.K.) Briq.

Additional & emended synonymy: *Verbena inflata* Humb. & Bonpl. apud Steud., Nom. Bot. Phan., ed. 1, 873. 1821. *Verbena inflata* Kunth apud Spreng. in L., Syst. Veg., ed. 16, 2: 749. 1825.

Bibliography: see under the genus as a whole.

Recent collectors describe this plant as a small, low-growing, decumbent, spreading herb, with ascending branches, growing in clumps, and have found it growing in dry meadows, in dry or very dry ground, and in open areas with very dry volcanic-ash soil on the interandean highlands, at 2100--3185 m. altitude, flowering from March to July and in September, in fruit from April to June and in September. The corollas are said to have been "white" on *Asplund 17069* & *20464* and *Rimbach 176*, while on *Asplund 16145* it is said that the petals were "white, faintly flushed with violet along the margins" and on *Soejarto & Hernández 1339* the sepals were "green with dark-purple tinge, petals white". The latter collectors report the plant "common on roadsides".

Briquet (1894), Knuth (1927), Junell (1934), and Dalla Torre & Harms (1963) all assert that the genus occurs only in Colombia, but Macloskie (1905) reports it collected in wet ground by Hatcher at Río Santa Cruz in southern Patagonia on June 9, 1897, claiming to have verified this difficult-to-believe identification by comparison at the Gray Herbarium at Cambridge, Massachusetts. He gives the overall distribution of the genus as "Quito and southwards in the Andes. I know it only from Ecuador and Peru.

Junell (1934) claims a close affinity of *Hierobotana inflata* with *Verbena canadensis* (L.) Britton, but Briquet (1894) much more correctly compares it with "*V. canescens* Kunth" [and, less correctly, with "*V. pinnatifida* Schau."].

The only common or vernacular name recently reported for *H. inflata* is the widely applied "verbena". Material has been misidentified and distributed in some herbaria as *Verbena microphylla* H.B.K. and *Verbena* sp.

Additional citations: ECUADOR: Chimborazo: *Asplund 20464* (Ld, N); *Fagerlind & Wibom s.n.* [X.1952] (Ld); *Rimbach 176* (E--1030440);

Schimpff 746 (Mu). Cotopaxi: *Collector undetermined s.n.* [1838] (Mu), *s.n.* [1858] (Mu). Pichincha: *Asplund 16145* (Ld, N), *17069* (N, W--2652457); *Herb. Univ. Cent. Quito 2347* (Mu), *2348* (Mu), *2349* (Mu); *Humbles 6199* (Ac); *Jameson 228* (Pd). Tunguragua: *Soejarto & Hernández 1339* (Oa). PERU: Ica: *Ellenberg 4915* (Ld).

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ADDITIONAL NOTES ON THE GENUS *VITEX*. XI

Harold N. Moldenke

The considerable amount of information which has come to my attention from literature and from herbarium specimens since the publication of my last previous paper on this genus in 1968 is hereinafter summarized. Herbarium acronyms used herein, as also in my long series of paper in this journal since 1929, are fully explained in previous papers and in my "Fifth Summary of the *Verbenaceae*...." etc. (1971), volume 2, pages 795--801.

VITEX Tourn, ex L., Gen. Pl., ed. 1, 186. 1737; Sp. Pl., ed. 1, imp. 1, 2: 635. 1753; Gen. Pl., ed. 5, imp. 1, 285. 1754.

Additional & emended synonymy: *Allasia* Lour., Fl. Cochinch., ed. 1, 84. 1790. *Tripinna* Lour., Fl. Cochinch., ed. 1, 476. 1790. *Vitex* Willd. ex Moon, Cat. Indig. Exot. Pl. Ceyl. 1: 36. 1824. *Chrysomallum* Petit-Thou. ex Spach, Hist. Nat. Vég. Phan. 9: 226. 1840. *Nephrandra* Cothen ex Spach, Hist. Nat. Vég. Phan. 9: 226. 1840. *Walrothia* Hassk., Cat. Pl. Hort. Bot. Bogor. Cult. Alt. 134. 1844. *Ephialum* Soland. apud Wittst., Etymol.-bot. Handwörterb. 325. 1852. *Agnus castus* Carr., Rev. Hortic. 42: 415. 1871. *Stereosperma* Hook. f & Thoms. ex C. B. Clarke in Hook. f., Fl. Brit. India 4: 585 & 774, in syn. 1885. *Ephielis* Banks & Soland. apud Dalla Torre & Harms, Gen. Siphonog., imp. 1, 432. 1904. *Mailelou* Adans. apud Dalla Torre & Harms, Gen.Siphonog., imp. 1, 432. 1904. *Psilogyne* DC. apud Dalla Torre & Harms, Gen. Siphonog., imp. 1, 432. 1904. *Vitex* [Tourn. ex L.] L. apud Dalla Torre & Harms, Gen. Siphonog., imp. 1, 432. 1904. *Viter* Aubréville, Ann. Acad. Sci. Colon. 9: 237, sphalm. 1938. *Agnus castus* Tourn. ex Mold., Alph. List Inv. Names 4, in syn. 1940. *Pistaciovitex* L. apud Fedde & Schust., Justs Bot. Jahresber. 60 (2): 574, in syn. 1941. *Vitex* (Tourn.) L. ex Fournier, Quat. Fl. France 807. 1961 *Mithrudatea* Hort. ex Mold., Fifth Summ. 2: 572, in syn. 1971. *Crysomallum* [Thou.] apud López-Palacios, Fl. Venez. Verb. 648, in syn. 1977. *Nephandra* [Willd.] apud López-Palacios, Fl. Venez. Verb. 651, in syn. 1977. *Psilogine* [A. DC.] apud López-Palacios, Fl. Venez. Verb. 652, in syn. 1977. *Vetex* Kurup, Journ. Bomb. Nat. Hist. Soc. 75: 325, sphalm. 1978.

Additional & emended bibliography: Nicolaus, Antidot. Nicol. in Mesue, Canon. Univ. leaf 328 recto. 1510; Bartholom. Angl. [transl. Trevisa], Propriet. Rer. 1535; Dod., Pempt. 762. 1583; J. P. Camus,